A Directory of

Forest Genetics Research

in the United States and Canada

Jonathan W. Wright

Station Paper No. 53

Northeastern Forest Experiment Station
Upper Darby, Pennsylvania
Ralph W. Marquis, Director

1952

U.S. Department of Agriculture—Forest Service

CONTENTS

	Page
INTRODUCTION	1
I - FOREST GENETICS RESEARCH IN THE UNITED STATES	3
Federal	3
Department of Agriculture	
Bureau of Entomology & Plant Quarantine	3
Bureau of Plant Industry, Soils & Agricultural Engineering	3
Forest Service	4
Soil Conservation Service	6
Tennessee Valley Authority	6
State	6
Private	
Colleges, Universities, & Experiment Stations	7
Research Institutions	9
Industries	9
II - FOREST GENETICS RESEARCH IN CANADA	10

A Directory of

Forest Genetics Research

in the United States and Canada

by

Jonathan W. Wright, *geneticist*

Northeastern Forest Experiment Station
Forest Service, U.S. Dept. Agriculture

INTRODUCTION

A FEW YEARS AGO only a handful of people were engaged in forest-genetics research. Today there are scores.

There is necessarily a long lapse between the start of a forest-genetics investigation and publication of its results. Thus one who is interested in obtaining recent information on work in progress on a particular species or in a particular region must rely on correspondence or personal visits to keep himself informed.

This directory was compiled to help people who are interested in forest-genetics investigations keep themselves informed about the work now going on in this field.

This directory includes only those agencies and individuals who are engaged directly in forest genetics by having programs under way in selection, breeding, progeny testing, racial testing, or cytology of forest trees.

A complete listing of arboreta engaged in testing unselected native and exotic trees can be found in "Arboretums and botanical gardens of North America," by Donald Wyman, in Chronica Botanica 10: 398-497, 1947. References to selection and testing of trees for fruit quality or ornamental characters may be found in such periodicals as the proceedings of the Northern Nut Growers Association, the National Shade Tree Conference, the American Society of Horticultural Science, the Southeastern Pecan Growers Association, and various nursery catalogs. Detailed information about work in the South can be found in the Southeastern Forest Experiment Station's "Directory of forest genetics activities in the South," (Station Paper 17, 1952).

No attempt was made to show the extent of cooperation among various agencies. Considerable cooperation exists, fostered by the annual meetings of the Committee on Southern Forest Tree Improvement, the annual summaries of progress on blister-rust resistance, newsletters such as the "Tree Breeders' Newsletter" and the "Putative Pollen Grain," as well as by exchange of information about common problems. The cooperation is closest among agencies involved in racial tests and selection of southern pines, testing of western pine hybrids, testing of chestnut hybrids, testing of poplar hybrids, and selection and testing of white pine selections or hybrids.

An attempt will be made to keep this directory up to date; so corrections or additions will be welcomed.

I

FOREST GENETICS RESEARCH IN THE UNITED STATES

FEDERAL

DEPARTMENT OF AGRICULTURE

Bureau of Entomology and Plant Quarantine

Washington 25, D. C.--J. F. Martin. Coordination of attack and clearinghouse for news on the resistance of white pines to blister rust.

Berkely 4, California.--Forestry Building, University of California. D. R. Miller, H.R. Offord. Sugar pine, western white pine, exotic white pines: selection for resistance to blister rust.

Spokane 8, Washington.--618 Realty Building. R. T. Bingham. Western white pines: selection for resistance to blister rust, vegetative propagation, intraspecific hybridization, field testing.

Bureau of Plant Industry, Soils and Agricultural Engineering Division of Forest Pathology

Asheville, North Carolina.--223 Federal Building. E. Richard Toole, Bratislav Zak (Athens, Ga.), R. B. Clapper (Lake City, Fla.). Mimosa (Albizzia): selection, vegetative propagation, and intraspecific hybridization of trees resistant to mimosa wilt. Shortleaf pine: selection, grafting, intraspecific hybridization and racial tests with special reference to littleleaf disease.

Beltsville, Maryland.--Plant Industry Station. G. F. Gravatt, F. H. Berry, J. Diller. Chestnut: hybridization, introduction of exotics, field testing for resistance to chestnut blight, form, vigor, and fruitfulness. Field tests are conducted over a wide area in cooperation with many other agencies.

Columbus 7, Ohio.--Box 244, Station G. R.U. Swingle. Elm: selection, hybridization, vegetative propagation, nursery and field testing with special reference to Dutch elm disease and phloem necrosis.

New Haven 11, Connecticut.--360 Prospect Street. Alma A. Waterman. Poplar: testing of hybrid poplar clones for resistance to disease (including field and laboratory inoculation).

New Orleans, Louisiana.--710 Lowich Building, 2026 St. Charles Avenue. Southern pines: selection for resistance to fusiform rust (slash pine), brown spot disease (longleaf pine), and racial variation (loblolly pine).

Portland, Oregon.--P.O. Box 4137. J.L. Bedwell, T.W. Childs. Native and exotic white pines: field testing and selection for resistance to blister rust.

Forest Service

California Forest and Range Experiment Station.--Institute of Forest Genetics, Placerville, California. F. I. Righter, J. W. Duffield, N. T. Mirov. Pine (principally in the series Cembrae, Flexiles, Strobi, Australes, Insignes, Macrocarpae): intra- and interspecific hybridization, mass-production of hybrids, vegetative propagation, racial tests, terpene chemistry in relation to taxonomy, stimulation of flowering, testing of exotics. Most complete pine arboretum in the world. Cooperating with other agencies in controlled pollination, selection, and field trials of hybrids.

Central States Forest Experiment Station.--111 Old Federal Building, Columbus 15, Ohio. R. W. Merz (P. O. Box 203, Athens, Ohio). Yellow poplar: racial tests, selections, one-parent progeny tests.

Lake States Forest Experiment Station.--University Farm, St. Paul 1, Minnesota. P. O. Rudolf. Red and Scotch pines: racial tests.

Northern Rocky Mountain Forest and Range Experiment Station.--Federal Building, Missoula, Montana. A. E. Squillace. Western white pine: field testing of rust-resistant selections, selection for form and vigor. Lodgepole and ponderosa pines: interspecific hybridization, field testing of California-produced hybrids, racial tests.

Northeastern Forest Experiment Station.--102 Motors Avenue, Upper Darby, Pennsylvania. E. J. Schreiner, J. W. Wright, A. F. Hough. Poplar: hybridization, selection, and field testing with special reference to form, vigor and disease resistance. Field testing conducted over a large area in cooperation with other agencies. Maple, birch, ash, pine (principally in series Strobi, Lariciones, and Insignes), spruce: interspecific and interracial hybridization, field testing of hybrids, cytology (ash, maple) racial tests (ash, red pine), selection for form and weevil resistance (white pine).

Pacific Northwest Forest Experiment Station.--423 U. S. Court House, Portland 5, Oregon. Leo Isaac. Douglas-fir: racial tests. In cooperation with the Experiment Station several lumber companies and foreign experiment stations have selected and are making progeny tests of outstanding stands and trees.

Southern Forest Experiment Station.--704 Lowich Building, 2026 St. Charles Avenue, New Orleans, Louisiana. P. C. Wakely and other personnel at research centers. Southern pines: intra- and interspecific hybridization, selection, field testing, racial tests, stimulation of flowering, with particular reference to form and vigor.

Southeastern Forest Experiment Station.--223 Federal Building, P.O. Box 252, Asheville, North Carolina. K. W. Dorman, C. S. Schopmeyer, Francois Mergen. Southern pines: selection, intra- and interspecific hybridization, field testing, racial tests, vegetative propagation, testing of exotics, stimulation of flowering, with particular reference to naval-stores production, form and vigor. Much of work in progress is conducted at Lake City Florida.

Soil Conservation Service

Beltsville, Maryland.--Beltsville Observational Nursery. W. W. Stiner. Black locust: selection for form, one-parent testing. Testing of exotics.

TENNESSEE VALLEY AUTHORITY

Norris, Tennessee.--Division of Forest Relations. William Cummings, Spencer B. Chase. Pine (principally loblolly, shortleaf, and eastern white): nursery selection and racial variation. Black walnut: selection for nut quality, racial variation. Racial tests and studies of figured grain in various species; testing of exotics. Vegetative propagation of many species.

STATE

North Carolina.--Department of Conservation and Development, Division of Forestry. Raleigh, North Carolina. Phillip Griffeth. Loblolly pine: selection and seed-orchard development. Testing of exotics.

Pennsylvania.--Department of Forests and Waters, Harrisburg, Pa. Shortleaf pine: racial tests.

Texas.--Forest Service, College Station, Texas. Bruce J. Zobel. Southern pines: natural hybridization, field and nursery selection, racial variation, intra- and interspecific hybridization, vegetative propagation, testing of exotic Mexican and southwestern pines.

PRIVATE

COLLEGES, UNIVERSITIES, & EXPERIMENT STATIONS

Alabama Polytechnic Institute.--Forestry Department, Auburn, Alabama. George Garin. Southern pines: testing of interspecific hybrids, racial tests. Testing of exotics.

University of Arkansas.--College of Agriculture, Fayetteville, Arkansas, in cooperation with Arkansas Resources and Development Commission, Division of Forestry and Parks, Little Rock, Ark. Southern pines and eastern redcedar: racial tests, selection, and one-parent progeny tests.

Beloit College.--Beloit, Wisconsin. Philip Joransen. Aspen: colchicine, nursery testing.

Connecticut Agricultural Experiment Station.--Box 1106, New Haven, Connecticut. (In cooperation with the Division of Forest Pathology.) A. H. Graves, Hans Nienstaedt. Chestnut: vegetative propagation, interspecific hybridization, selection, and testing of exotics for resistance to chestnut blight.

University of Florida.--Gainesville, Florida. T. O. Perry. Southern pines: selection for form and vigor, intraspecific hybridization, racial tests, vegetative propagation.

Georgia Agricultural Experiment Station.--Experiment, Georgia. Longleaf pine: testing of irradiated seed. Southern pines: selection, one-parent and two-parent progeny tests of superior trees.

Harvard University.--Cambridge, Massachusetts. Scott Pauley (Maria Moors Cabot Foundation for Botanical Research, Petersham, Mass.) A. G. Johnson (Arnold Arboretum, Jamaica Plains, Mass.) Poplar (principally balsam poplars, cottonwoods, aspen): racial tests, selection, intra- and interspecific hybridization. Northern red oak: racial tests. Pine (principally in series Flexiles, Strobi, Lariciones, Insignes), spruce: interspecific hybridization, racial tests, stimulation of flowering. Introduction and testing of exotics. Studies of the effects of X-rays on vegetative vigor.

Mississippi Agricultural Experiment Station.--College Station, Mississippi. Loblolly and shortleaf pines: back-

crossing of the interspecific hybrid to each of the parents and testing of the progeny.

University of New Hampshire.--School of Forestry, Durham, New Hampshire. Howard Kriebel (now on leave at Yale University.) Eastern white pine: selection and testing for resistance to white pine weevil.

State University of New York.--College of Forestry, Syracuse, New York. R. R. Hirt. Eastern white pine: selection and field testing of native and exotic trees resistant to blister rust. Chestnut: selection for resistance to blight.

Purdue University.--Department of Botany, West Lafayette, Ind. A. T. Guard, Robert Carpenter. Yellow-poplar: interracial hybridization, compatibilities, problem of sexual reproduction.

University of Virginia.--Blandy Experimental Farm, Boyce, Virginia. W. S. Flory, Jr. Conifers: cytology and phylogeny. Ash, maple: racial variation. Oaks: natural hybridity. Testing of exotics.

University of Washington.--School of Forestry, Seattle, Washington. P. G. Haddock. Alder: interspecific hybridization, polyploid induction.

College of William and Mary.--Department of Botany, Williamsburg, Virginia. Miss Bernice M. Speese, J. T. Baldwin, Jr. (now on leave). Cytotaxonomy of temperate and tropical plants, including some forest trees.

University of Wisconsin.--Departments of Genetics and Plant Pathology, Madison 6, Wisconsin (in cooperation with other State and Federal agencies). A. J. Riker, R. F. Patton, R. G. Hitt, James E. Kuntz. Pine (principally eastern white, red, jack): selection for resistance to blister rust in white pine, for form and vigor in other species; intraspecific hybridization, vegetative propagation, stimulation of flowering. Poplar: selection, field testing, and hybridization.

RESEARCH INSTITUTIONS

Boyce Thompson Institute for Plant Research, Inc.--Yonkers 3, New York. Clyde Chandler. Larch: interspecific hybridization, selection, testing of exotics.

Fox Demonstration Forest.--Hillsboro, New Hampshire. H. T. Baldwin. Norway spruce and Scotch pine: racial tests, seed certification.

Ida Cason Callaway Foundation.--Hamilton, Georgia. James T. Greene. Southern pines: selection and one-parent progeny tests, intra- and interspecific hybridization, racial tests, tests of exotics.

Committee on Southern Forest Tree Improvement.--Chairman, Carl Ostrom, Southeastern Forest Experiment Station, Asheville, North Carolina. The committee is composed of members from industry, schools, and government. It plans and coordinates activities of various research agencies in the South.

Forest Genetics Research Foundation.--Russ Building, San Francisco 4, California. A nonprofit corporation that supports worth-while forest-genetics projects in any part of the Nation. Financial contributions are solicited from industry, other foundations, trust funds, etc.

INDUSTRIES

A. J. Hodges Industries, Inc.--Shreveport, Louisiana. Thomas Campbell. Southern pines: testing of control-pollinated stock furnished by Southern Forest Experiment Station.

Nekoosa-Edwards Paper Co.--Port Edwards, Wisconsin. R. C. Dosen. Jack pine: selection, intraspecific hybridization, progeny testing.

West Virginia Pulp and Paper Co.--Westvaco Experimental Forest, Georgetown, South Carolina. P. T. Lannan, L. T. Easeley. Loblolly pine: selection, one-parent progeny tests, seed-orchard development, stimulation of flowering.

II

FOREST GENETICS RESEARCH IN CANADA

Canada Department of Agriculture.--Division of Forest Biology, Victoria, British Columbia. W. A. Porter. Western white pine: selection and testing for resistance to blister rust.

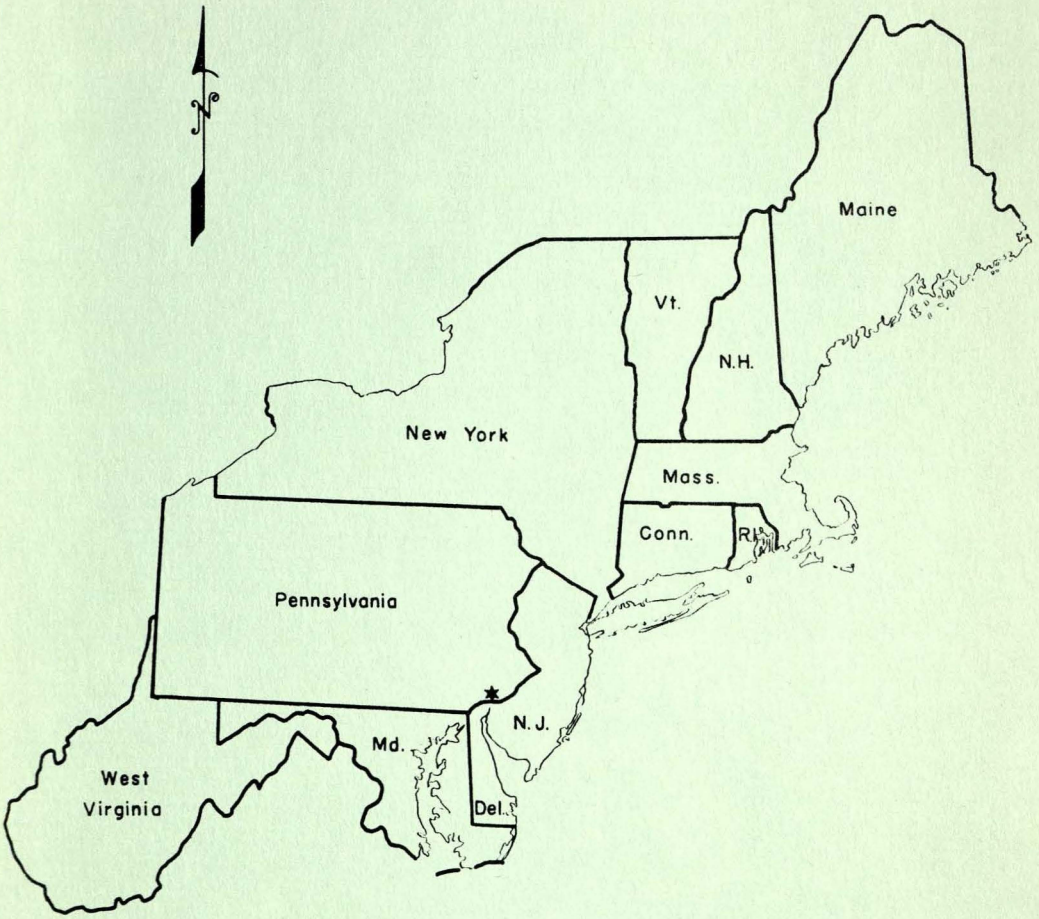
Canada Department of Agriculture.--Forest Nursery Station, Indian Head, Saskatchewan. W. H. Cram, J. Walker. Caragana, spruce, Manitoba maple, poplar, Insignes pines: selection with special reference to shelterbelt plantings, self-incompatibility studies, vegetative propagation, racial tests.

Canada Department of Agriculture.--Horticultural Division, Central Experimental Farm, Ottawa, Ontario. A. W. S. Hunter. Elm: selection and interspecific hybridization of white elm with special reference to Dutch elm disease, vegetative propagation, chromosome doubling.

Canada Department of Resources and Development.--Forestry Branch, Petawawa Forest Experiment Station, Chalk River, Ontario. M. Holst. Spruce (principally white, red, black, Norway) and pine (red and jack): one- and two-parent progeny tests (principally in white spruce), selfing, selection, testing of exotics. Eastern white pine (in cooperation with C. Heimburger): racial tests, selection, species hybridization.

Ontario Department of Lands and Forests.--Southern Experiment Station, Maple, Ontario. C. C. Heimburger. Eastern white pine and related exotics (in cooperation with M. Holst), red pine: racial tests, selection (for resistance to blister rust and weevil in white pine, and to European shoot moth in red pine), intra- and interspecific hybridization. Aspen-silver poplar group: racial tests, selection (for rooting capacity and disease resistance), species hybridization.

University of British Columbia.--Vancouver. George M. Allen. Douglas-fir: selfing, parthenocarpy, fruiting behavior.



TERRITORY SERVED
by the
NORTHEASTERN FOREST
EXPERIMENT STATION

UPPER DARBY, PA.